

Week 4 Deployment on Flask

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Batch Code: LISUM01

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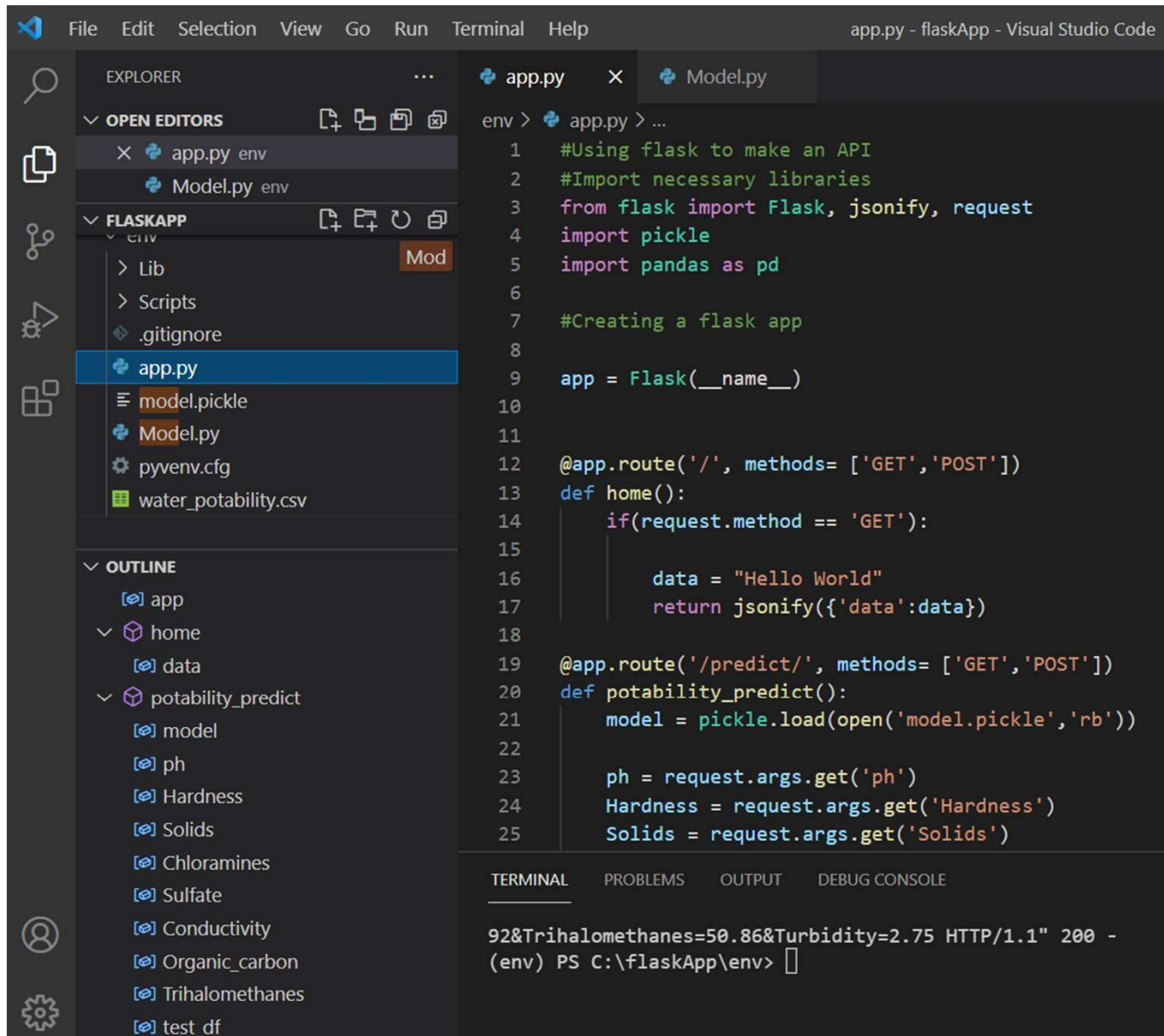
submitted to Github

Data Source

<https://www.kaggle.com/adityakadiwal/water-potability>

Data file name

water_potability.csv



app.py

Model.py X

env > Model.py > ...

```
1
2 # Importing the libraries
3 import pandas as pd
4 import pickle
5 from sklearn.linear_model import LinearRegression
6 from sklearn.model_selection import train_test_split
7
8 # Importing the dataset
9 dataset = pd.read_csv('water_potability.csv')
10
11 dataset = dataset.dropna()
12
13
14 X=dataset[['ph','Hardness','Solids','Chloramines','Sulfate','Conductivity','Organic_carbon','Trihalomethanes' ]]
15 y = dataset['Potability']
16
17 # Splitting the dataset into the Training set and Test set
18
19 X_train, X_test, y_train, y_test = train_test_split(X, y, test_size = 0.25, random_state = 101)
20
21 regressor = LinearRegression()
22
23 regressor.fit(X_train,y_train)
24
25
26 pickle.dump(regressor,open('model.pickle','wb'))
27
```

env > app.py > ...

```
6
7 #Creating a flask app
8
9 app = Flask(__name__)
10
11
12 @app.route('/', methods= ['GET','POST'])
13 def home():
14     if(request.method == 'GET'):
15
16         data = "Hello World"
17         return jsonify({'data':data})
18
19 @app.route('/predict/', methods= ['GET','POST'])
20 def potability_predict():
21     model = pickle.load(open('model.pickle','rb'))
22
23     ph = request.args.get('ph')
24     Hardness = request.args.get('Hardness')
25     Solids = request.args.get('Solids')
26     Chloramines = request.args.get('Chloramines')
27     Sulfate = request.args.get('Sulfate')
28     Conductivity = request.args.get('Conductivity')
29     Organic_carbon = request.args.get('Organic_carbon')
30     Trihalomethanes = request.args.get('Trihalomethanes')
31
32     test_df = pd.DataFrame({'ph':[ph], 'Hardness':[Hardness], 'Solids':[Solids], 'Chloramines':[Chloramines], 'Sulfate':[Sulfate],
33     , 'Conductivity':[Conductivity], 'Organic_carbon':[Organic_carbon], 'Trihalomethanes':[Trihalomethanes]})
34
35     pred_potability = model.predict(test_df)
36     return jsonify({'Water Potability':str(pred_potability)})
37
38 # Driver function
39 if __name__ == '__main__':
40     app.run(debug=True)
41
```

Application Deployment

```
TERMINAL  PROBLEMS  OUTPUT  DEBUG CONSOLE

(env) PS C:\flaskApp\env> python app.py
* Serving Flask app 'app' (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: on
* Restarting with stat
* Debugger is active!
* Debugger PIN: 674-174-903
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
```

Testing using postman

Postman

File Edit View Help

New

Import

Runner

My Workspace

Invite

Filter

History

Collections

APIs BETA

New Collection

Trash

Calculate
1 request

sls
3 requests

Test
2 requests

Test1
0 requests

Launchpad

POST TestPost

POST https://ugt2ltwm72.exec...

POST https://f0jmtsprsg.exec...

GET https://f0jmtsprsg.execut...

No Environment

Comments (0)

Example

GET

http://127.0.0.1:5000/predict/?ph=7.08&Hardness=169.97&Solids=23403.64&Chloramines=8.52&Sulfate=333.78&Conductivity=475.57&Organic_carbon=12.92&Trihalomethanes=...

Send

Save

Params

Authorization

Headers (9)

Body

Pre-request Script

Tests

Settings

Cookie

Query Params

KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/> ph	7.08	
<input checked="" type="checkbox"/> Hardness	169.97	
<input checked="" type="checkbox"/> Solids	23403.64	
<input checked="" type="checkbox"/> Chloramines	8.52	
<input checked="" type="checkbox"/> Sulfate	333.78	
<input checked="" type="checkbox"/> Conductivity	475.57	
<input checked="" type="checkbox"/> Organic_carbon	12.92	
<input checked="" type="checkbox"/> Trihalomethanes	50.86	
<input checked="" type="checkbox"/> Turbidity	2.75	
Key	Value	Description

Body

Cookies

Headers (4)

Test Results

Status: 200 OK

Time: 12ms

Size: 186 B

Save Respo

Pretty

Raw

Preview

Visualize BETA

JSON

```
1 {
2   "Water Potability": "[0.41188912]"
3 }
```

Postman access test to waterpotability application deployed on Heroku

postman link [https://waterpotability.herokuapp.com/predict/?ph=7.08&Hardness=169.97&Solids=23403.64
&Chloramines=8.52&Sulfate=333.78&Conductivity=475.57
&Organic_carbon=12.92&Trihalomethanes=50.86&Turbidity=2.75](https://waterpotability.herokuapp.com/predict/?ph=7.08&Hardness=169.97&Solids=23403.64&Chloramines=8.52&Sulfate=333.78&Conductivity=475.57&Organic_carbon=12.92&Trihalomethanes=50.86&Turbidity=2.75)